UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/447,490	11/23/99	ECKARDT R	0691-018A/GP

HM12/0629
SCHWEITZER CORNMAN GROSS & BONDELL LLP
230 PARK AVENUE
SUITE 2200
NEW YORK NY 10169

EXAMINER	
MCKENZIE, T	
ART UNIT	**PAPER NUMBER**
1624	10

DATE MAILED: 06/29/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Advisory Action	Application No. 09/447,490	Applicant(s) ECKARDT ET AL.	
	Examiner Thomas McKenzie Ph. D.	Art Unit 1624	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED *01 June 2000* FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either a timely filed amendment which places the application in condition for allowance or a Notice of Appeal. Alternatively, applicant may obtain further examination by timely filling a request for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d).

PERIOD FOR REPLY [check only a) or b)]

a) ☒ The period for reply expires *3* months from the mailing date of the final rejection.

b) ☐ In view of the early submission of the proposed reply (within two months as set forth in MPEP § 707.07 (f)), the period for reply expires on the mailing date of this Advisory Action, OR continues to run from the mailing date of the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Extensions of time may be obtained under 37 CFR 1.136 (a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked.

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37CFR 1.191(d)), to avoid dismissal of the appeal.

2. ☐ The proposed amendment(s) will be entered upon the timely submission of a Notice of Appeal and Appeal Brief with requisite fees.

3. ☐ The proposed amendment(s) will not be entered because:

   (a) ☐ they raise new issues that would require further consideration and/or search. (see NOTE below);

   (b) ☐ they raise the issue of new matter. (see Note below);

   (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

   (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____.

4. ☐ Applicant's reply has overcome the following rejection(s): _____.

5. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

6. ☒ The a)☐ affidavit, b)☐ exhibit, or c)☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: *See Continuation Sheet.*

7. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

8. ☒ For purposes of Appeal, the status of the claim(s) is as follows (see attached written explanation, if any):

   Claim(s) allowed: *none*.

   Claim(s) objected to: *none*.

   Claim(s) rejected: *2-8*.

   Claim(s) withdrawn from consideration: _____.

9. ☐ The proposed drawing correction filed on _____ a)☐ has b)☐ has not been approved by the Examiner.

10. ☐ Note the attached Information Disclosure Statement(s)(PTO-1449) Paper No(s). _____.

11. ☒ Other: *Note the attached Notice of References Cited (PTO-892)*

Continuation of 6. does NOT place the application in condition for allowance because:

1) Attorney urges withdrawal of final rejection because an erroneous translation was relied upon. This is not persuasive because it was the parent case that relied on the erroneous translation. Examiner provided a correct translation in the First Office Action on the Merits. The net result of correcting the translation was to convert an obviousness rejection into an anticipation rejection. Both were made in the FAOM. Examiner relied upon both the German language original and the translation of Aklin in rejecting claims in the FAOM of 11/23/99 Claims 5,6,7, and 14 of Aklin as well as the specification, were relied upon in the initial rejection. Thus, there are no new grounds of rejection or new art relied upon in subsequent Advisory Actions.

2) Attorney argues that the previous Advisory Action was the first to employ claims 1, 2, and 3 of Aklin in making a rejection. This is not persuasive because the crucial material is in claim 14 and the references to claims 1, 2, and 3 is merely incidental to understanding the substance of claim 14 of Aklin.

3) Attorney argues that Examiner was unable to apply a rejection over the disclosure but rather relied upon the claims. This is not persuasive because

Aklin is a single document and it does not matter where in the document the teachings are located.

4) Attorney argues that the claims of Aklin can not be relied upon for making a rejection. This is not persuasive because Aklin is a single document. Two rejections have been made over Aklin, both an obvious rejection and an anticipation rejection. Both rely upon the document as a whole.

5) Attorney argues that Aklin fails to disclose a single step process that forms applicants' invention. Aklin does not describe a working example of a single step process. Claim 14 of Aklin makes clear that a single step process is envisioned and claimed even though it was not exemplified. The single step process has also been rejected as obvious in view of Aklin.

6) Attorney correctly notes that Aklin is silent as to the source of cyanic acid. This, of course, is not relevant to any obviousness rejection.

7) Attorney argues that acetic acid is not capable of "liberating cyanic acid from its salts". This is not convincing and is a fundamental misunderstanding of the concept of chemical equilibrium. The precise question is what is the equilibrium constant for the reaction of any acid and a cyanate salt. The answer depends on the acid involved. In a two step mechanism with a pre-equilibrium, in principle, a single molecule of the

intermediate cyanic acid will suffice, so long as it is replaced as fast as it is consumed in the second irreversible reaction. In the advisory action of 5/17/00 it was calculated that at equilibrium cyanic acid is produced to the extent of 8% and 47% by acetic and formic acid respectively. So long as the number is not 0%, both acids meet the test of being capabable of "liberating cyanic acid from its salts".

8) Attorney argues that the reaction between acetic acid and cyanate salts is altered by the presence of the imino stilbene substrate and this forms the heart of applicants' invention. This is not persuasive because there is no evidence that a trimolecular complex among the imino stilbene, acetic acid, and the cyanate anion is formed. Such trimolecular complexes are extremely rare in chemical reactions. To quote from "Organic Reactions, equilbria, kinetics, and mechanism"; [t]rimolecular reactions are very rare because the synchronous collision of three molecules is not very probable". The imino stilbene does have an effect in that it slowly consumes liberated cyanic acid in an irreversible process. The imino stilbene has no effect on the rate of cyanic formation or on the equilibrium constant of its formation. Please see point #9 below.

9) Attorney argues that acetic acid is not capable of being "some kind of cyanic production machine which supplies an endless amount of cyanic

acid". Attorney has misstated examiner's analysis of the reaction between acetic acid and cyanate salts. That reaction is not "endless" but obviously limited by the finite supply of cyanate. The reaction between acetic acid and cyanate salts is, in practical terms, instantaneous, in respect to the slower subsequent reaction of HNCO with imino-stilbene. Attorney has confused the rate of a reaction, which is the first derivative of concentration with respect to time, with the amount of a reagent, which is the concentration multiplied by the volume of the solution. A concise analysis of the reaction kinetics is provided by the section titled "Preliminary equilibrium" on page 199 of Lowry and Richardson. Although the rate equation (2.97) for such a preliminary equilibrium process has three concentration terms, the laws of chemical kinetics make clear this does not imply that a collision among three molecules is involved in the rate-determining step.

10) Attorney correctly notes that the Board of Interferences and Patent Appeals was silent regarding patentability of the amended claims. However, that silence is not a factor either favoring or disfavoring patentability of the current claims.

TCMcK
June 26, 2000